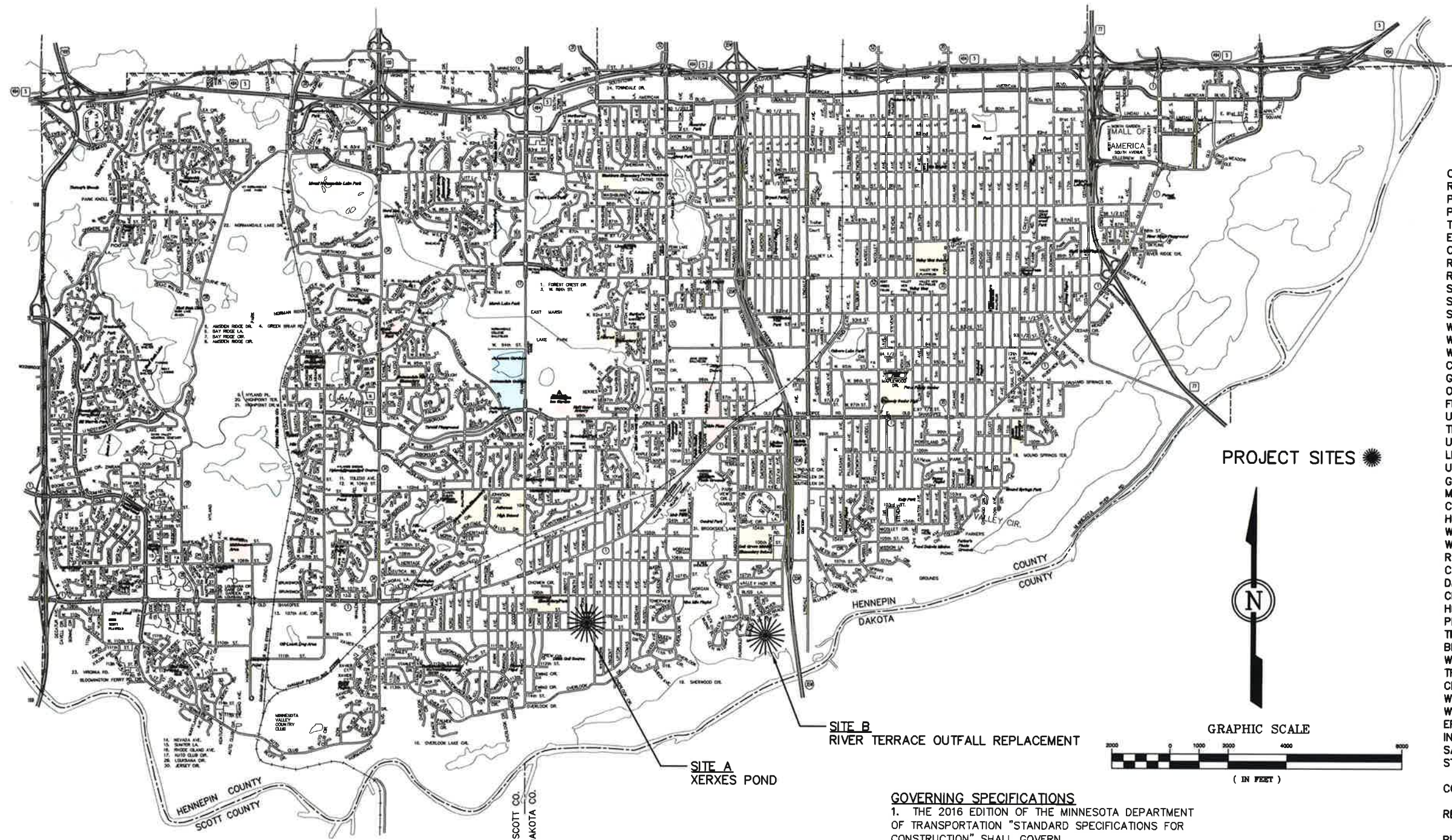


CITY OF BLOOMINGTON, ENGINEERING DIVISION
CONSTRUCTION PLANS FOR: 2016-902 STORM SEWER AND POND
MAINTENANCE PROJECT



INDEX

SHEET NO.	SHEET DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF QUANTITIES
3	STANDARD DETAIL SHEETS
4-8	PLAN SHEETS

LEGEND

	EXISTING	PROPOSED
CENTER LINE	---	---
RIGHT OF WAY LINE	---	---
PROPERTY LINE	---	---
PERM. EASEMENT LINE	---	---
TEMP. EASEMENT LINE	---	---
EDGE OF ASPHALT	---	---
CURB & GUTTER LINE	---	---
REMOVE CURB AND GUTTER	---	---
REM AND REPLACE C & G	---	---
SEWER LINE	---	---
SEWER SERVICE LINE	---	---
STORM SEWER	---	---
WATER LINE	---	---
WATER SERVICE LINE	---	---
WATER SRVC. LINE (ABAN.)	---	---
CATV LINE	---	---
GAS LINE	---	---
OVERHEAD ELECTRIC	---	---
FIBER OPTIC	---	---
UNDERGROUND ELECTRIC	---	---
TELEPHONE CABLE	---	---
UTILITY POLE	---	---
LIGHT POLE	---	---
UTILITY POLE W/ LIGHT	---	---
GUY WIRE	---	---
MANHOLE; STORM, SAN.	---	---
CATCH BASIN	---	---
HYDRANT	---	---
WATER VALVE	---	---
WATER VALVE IN MANHOLE	---	---
RAILROAD	---	---
CONIFEROUS TREE	---	---
DECIDUOUS TREE	---	---
CLEAR AND GRUB TREE	---	---
HEDGE	---	---
PED. CURB RAMP	---	---
TRAFFIC SIGNAL	---	---
BLOCK RETAINING WALL	---	---
WOOD RETAINING WALL	---	---
TREE LINE	---	---
CHAIN LINK FENCE	---	---
WOOD FENCE	---	---
WIRE FENCE	---	---
EROSION CONTROL FENCE	---	---
INLET PROTECTION	---	---
SANITARY MANHOLE	---	---
STORM MANHOLE	---	---
CONCRETE WALK	---	---
REMOVE CONCRETE WALK	---	---
BITUMINOUS SURFACE	---	---
REM. BITUMINOUS SURF.	---	---
CONCRETE WALK SPECIAL	---	---
GRAVEL SURFACE	---	---
MILL BITUMINOUS SURFACE	---	---
BUILDING	---	---
SUBGRADE EXCAVATION	---	---

PROJECT SITES



GRAPHIC SCALE



SITE B
RIVER TERRACE OUTFALL REPLACEMENT

SITE A
XERXES POND

GOVERNING SPECIFICATIONS

1. THE 2016 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.
2. ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE LATEST EDITION MMUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, CURRENT EDITION.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

APPROVED *Shelly A. Brown*
CITY ENGINEER

25072
LIC. NO.

10/3/2016
DATE

10/3/2016
DATE

AWARD DATE _____
COMPLETION DATE _____
CONTRACTOR _____
INSPECTOR _____


Drawing name: H:\PROJECTS\2016\2016-902 Storm and Pond Maint Project\CAD Files\2016-902 - STATEMENT OF QUANTITIES.dwg -- Printed: Oct 31, 2016 -- 2:58pm

STATEMENT OF QUANTITIES

2016-902 Storm Sewer and Pond Maintenance Project				Project		XERXES POND		RIVER TERRACE OUTFALL	
Estimated Quantities				Total		10910 XERXES AVE S.		1200 W. 110TH ST.	
				Quantity		Quantity		Quantity	
Item No.	Item Description	Unit	Estimated	Final	Estimated	Final	Estimated	Final	Final
2021.501	MOBILIZATION	LUMP SUM	1	0	0.3		0.7		
2101.502	CLEARING	ACRE	1.8	0	0		1.8		
2101.506	GRUBBING	ACRE	1.8	0	0		1.8		
2104.501	REMOVE SEWER PIPE (STORM)	LIN FT	852	0	0		852		
2104.509	REMOVE MANHOLE	EACH	4		0		4		
2105.501	COMMON EXCAVATION (P)	CU YD	772	0	772		0		
2105.601	DEWATERING	LUMP SUM	1	0	1		0		
2211.501	COARSE FILTER AGGREGATE, 1-1/2" CLEAR LIMESTONE	TON	40	0	0		40		
2501.515	30" CAS PIPE APRON	EACH	1	0	0		1		
2503.603	26" HDPE PIPE SEW DR 32.5	LF	851	0	0		851		
2506.502	CONST DRAINAGE STRUCTURE DES 48-4020	EACH	2	0	0		2		
2506.502	CONST DRAINAGE STRUCTURE DES 84-4020	EACH	1	0	0		1		
2506.602	REPAIR EXISTING STORM SEWER (SPECIAL)	LIN FT	16	0	16		0		
2511.502	RANDOM RIPRAP CLASS III	TON	45	0	15		30		
2511.513	GRANULAR FILTER MATERIAL	TON	22	0	7		15		
2557.603	SNOW FENCE	LIN FT	120	0	0		120		
2563.601	TRAFFIC CONTROL	LUMP SUM	1	0	1		0		
2573.502	SILT FENCE, TYPE REGULAR DUTY	LF	300	0	0		300		
2573.540	FILTER LOG, 12" BIOROLL	LF	300	0	0		300		
2573.608	TEMPORARY WOOD CHIP CONSTRUCTION ENTRANCE	SQ YD	330	0	330		0		
2573.608	TEMPORARY ACCESS TRAIL (P)	SQ YD	3250	0	0		3250		
2574.525	COMMON TOPSOIL BORROW (LV)	CU YD	2170		0		2170		
2574.525	LOAM TOPSOIL BORROW (LV)	CU YD	36		36		0		
2575.523	EROSION CONTROL BLANKETS CATEGORY 2 (SPECIAL)	SQ YD	2430	0	330		2100		
2575.523	EROSION CONTROL BLANKETS CATEGORY 3 (SPECIAL)	SQ YD	4265	0	0		4265		
2575.605	SEED MIXTURE 25-151 (LAWN)	SQ YD	330	0	330		0		
2575.605	SEED MIXTURE 35-241 (MESIC PRAIRIE GENERAL)	SQ YD	6365	0	0		6365		


REVISIONS		DATE	DESCRIPTION	BY

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.


Steven W. Segar
25072 10/3/16
L.C. # DATE

DRAWN: DAC
CHECKED: SWS
APPROVED: SWS

SHEET: 2 OF 8



CITY OF
Bloomington
MINNESOTA

ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
2016-902 STORM SEWER AND
POND MAINTENANCE PROJECT

STATEMENT OF QUANTITIES

Drawing name: H:\PROJECTS\2016\2016-902 Storm and Pond Maint Project\CAD Files\2019-902 - DETAILS.dwg Printed: Oct 28, 2016 - 12:31pm

SHEET:
3 OF 8

Drawing name: H:\PROJECTS\2016\2016-902 Storm and Pond Maint Project\CAD Files\2016-902 Plan - XERXES POND.dwg -- Printed: Oct 31, 2016 - 2:26pm

CONSTRUCTION NOTES

SITE ACCESS / STAGING

- * FURNISH & INSTALL WOOD CHIP ACCESS PAD
- * CLEAR & GRUB AS APPROVED
- * BRUSH OTHER VEGETATION AS APPROVED

CONSTRUCT STORM SEWER AS SHOWN

- * REPAIR 2 SECTIONS (16 LF) OF 18" RCP, TIE ALL JOINTS
- * FURNISH AND INSTALL 15 TONS RIP RAP
- * FURNISH AND INSTALL 7 TONS GRANULAR FILTER MATERIAL
- * SEE SHEET 5 FOR STORM SEWER PROFILE
- * SEE SPECIAL PROVISIONS

SEDIMENT EXCAVATION

- * REMOVE SEDIMENT AS SHOWN, TYPICAL SLOPES NOT TO EXCEED 3:1
- * SEDIMENT REMOVAL 772 CY, ALL EXCESS
- * ALL SEDIMENT SHALL BE DISPOSED OF IN ACCORDANCE WITH THE MINNESOTA POLLUTION CONTROL AGENCIES (MPCA) APPROVED WASTE MANAGEMENT PLAN AT A MUNICIPAL SOLID WASTE LANDFILL PER THE SPECIAL PROVISIONS
- * SEE SPEC. BOOK FOR SEDIMENT TESTING ANALYSIS
- * PROTECT EXISTING RIP RAP AND STORM SEWER PIPE

LANDSCAPE

- * FURNISH & INSTALL LOAM TOPSOIL BORROW AND SEED
- * FURNISH & INSTALL CATEGORY 2 EROSION CONTROL BLANKET

TRAFFIC CONTROL

- * THE TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING AND SPACING AS SHOWN IN LAYOUT 33 AND 84B OF THE 2014 TEMPORARY TRAFFIC CONTROL FIELD MANUAL. "CONSTRUCTION ACCESS AHEAD" SIGNS SHALL BE USED FOR ADVANCE WARNING
- * SEE SPECIAL PROVISIONS

DEWATERING

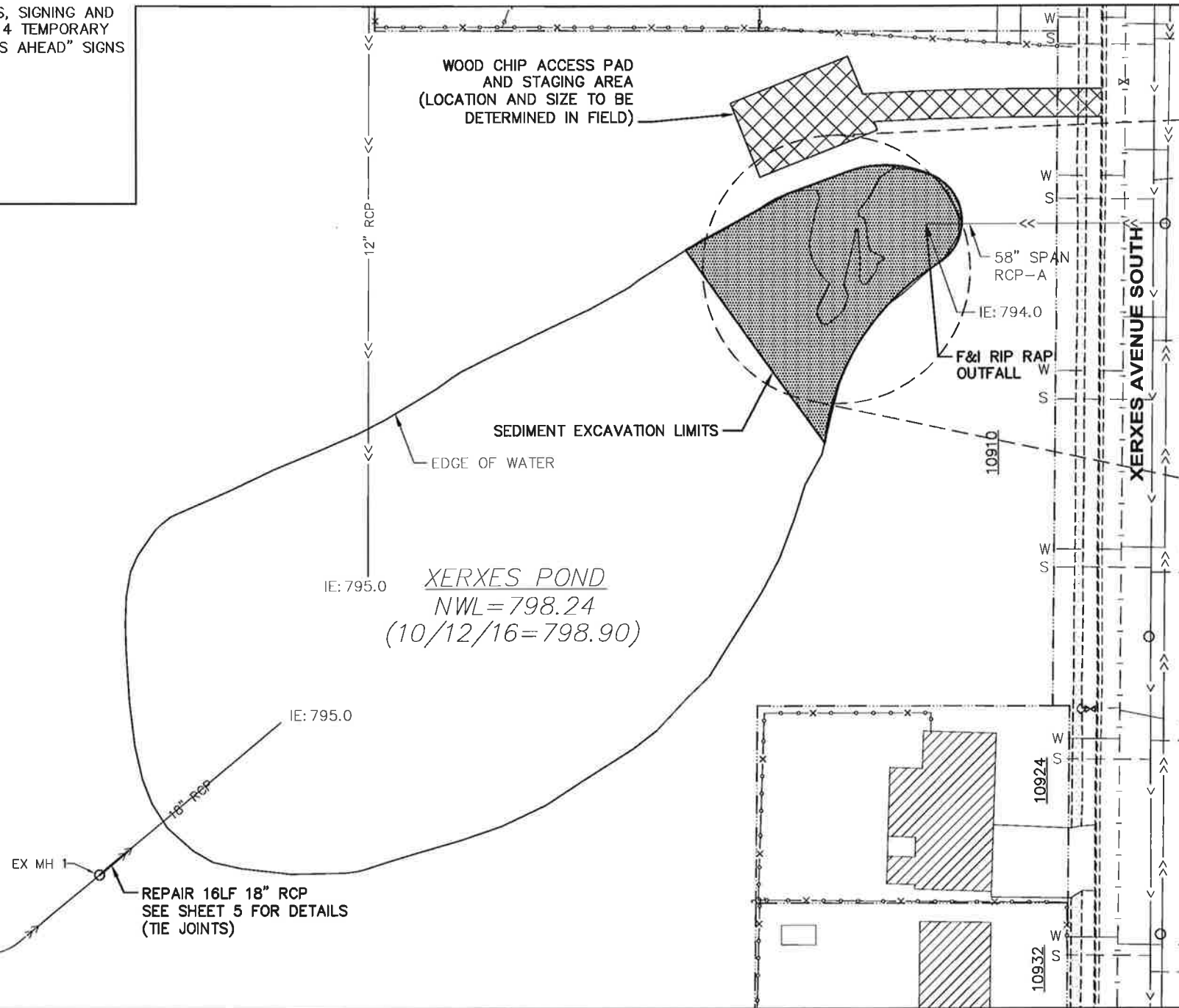
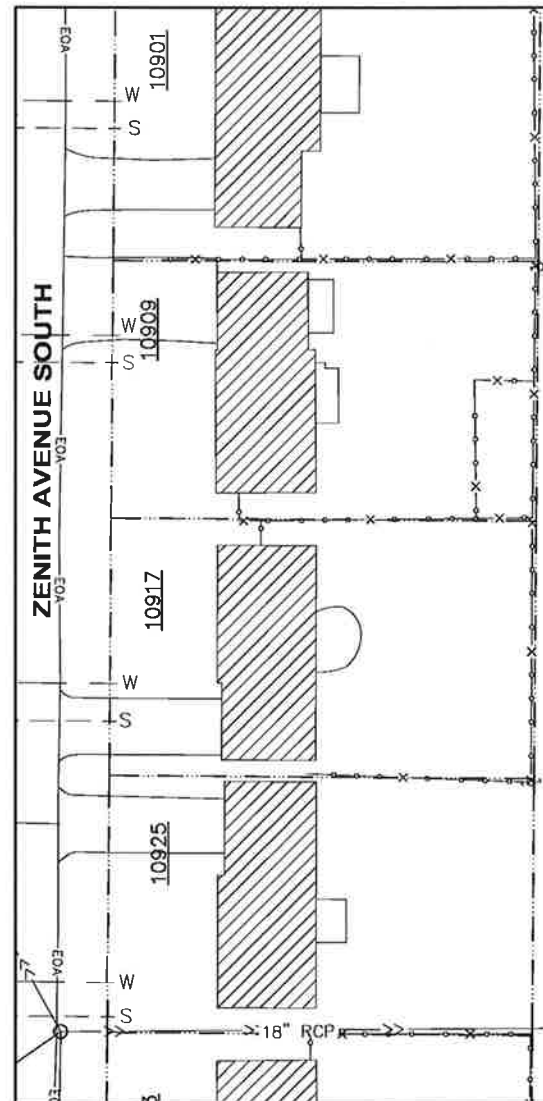
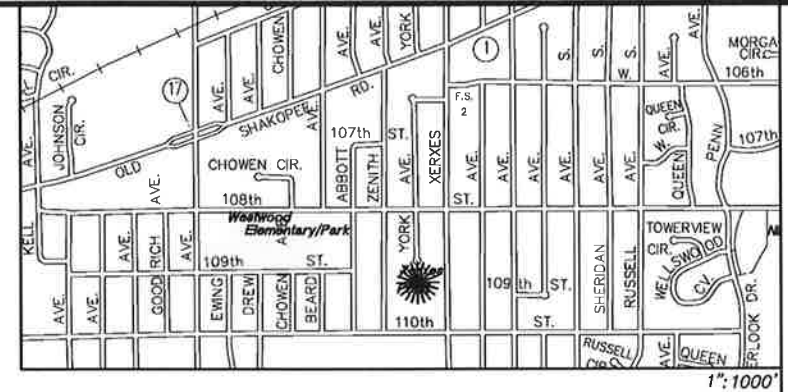
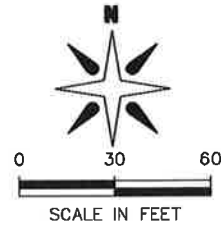
- * SEE SPECIAL PROVISIONS

SITE SAFETY

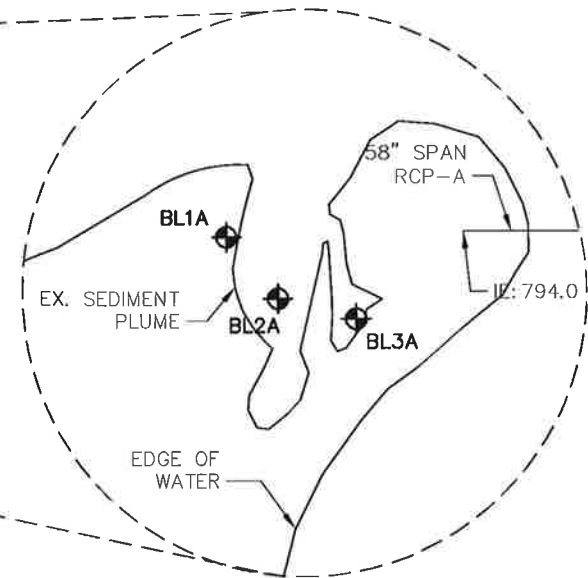
- * CONTRACTOR IS RESPONSIBLE TO ENSURE THE SAFETY OF ACCESS ROADS INCLUDING STAGING AREAS OR WORK PLATFORMS ON OR OVER ICE

SITE A – XERXES POND

10910 XERXES AVENUE SOUTH



SEDIMENT SAMPLE LOCATION
NO SCALE



SITE A – XERXES POND

SEDIMENT EXCAVATION
AND STORM SEWER REPAIRS

CITY OF
BLOOMINGTON
MINNESOTA

1700 W 98TH ST
BLOOMINGTON MN 55431
PHONE (612) 363-8700

ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT

2016-902 RIVER TERRACE OUTFALL PROJECT

REVISIONS

DATE	DESCRIPTION	BY

I HEREBY CERTIFY THAT THIS PLAN WAS
PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A DULY
LICENSED PROFESSIONAL ENGINEER UNDER
THE LAWS OF THE STATE OF MINNESOTA.

Steven W. Segal
Steven W. Segal
25072 10/3/16
L.C. # DATE

DRAWN: DAC
CHECKED: SWS
APPROVED: SWS

SHEET:
4 OF 8

CONSTRUCTION NOTES

SEDIMENT EXCAVATION

- * REMOVE SEDIMENT AS SHOWN, TYPICAL SLOPES NOT TO EXCEED 3:1
- * SEDIMENT REMOVAL 772 CY, ALL EXCESS
- * ALL SEDIMENT SHALL BE DISPOSED OF IN ACCORDANCE WITH THE MINNESOTA POLLUTION CONTROL AGENCIES (MPCA) APPROVED WASTE MANAGEMENT PLAN AT A MUNICIPAL SOLID WASTE LANDFILL PER THE SPECIAL PROVISIONS
- * SEE SPEC. BOOK FOR SEDIMENT TESTING ANALYSIS
- * PROTECT EXISTING RIPRAP AND STORM SEWER PIPE

LANDSCAPE

- * FURNISH & INSTALL LOAM TOPSOIL BORROW
AND SEED
* FURNISH & INSTALL CATEGORY 2 EROSION CONTROL BLANKET

TRAFFIC CONTROL

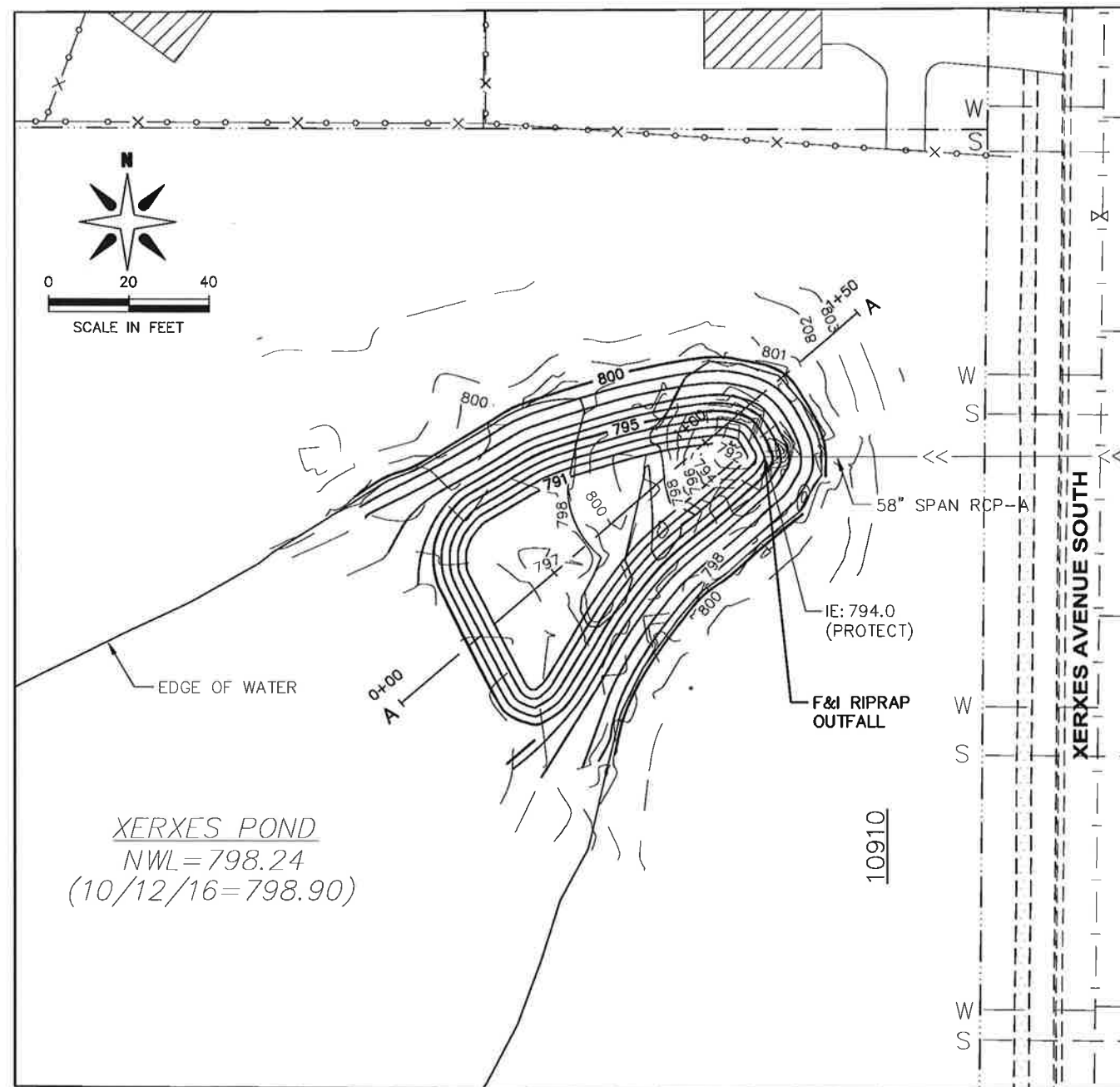
- * THE TRAFFIC CONTROL PLAN SHALL CONSIST OF: DEVICES, SIGNING AND SPACING AS SHOWN IN LAYOUT 33 AND 84B OF THE 2014 TEMPORARY TRAFFIC CONTROL FIELD MANUAL. "CONSTRUCTION ACCESS AHEAD" SIGNS SHALL BE USED FOR ADVANCE WARNING
- * SEE SPECIAL PROVISIONS

DEWATERING

- * SEE SPECIAL PROVISIONS

SITE SAFETY

- * CONTRACTOR IS RESPONSIBLE TO ENSURE THE SAFETY OF ACCESS ROADS INCLUDING STAGING AREAS OR WORK PLATFORMS ON OR OVER ICE

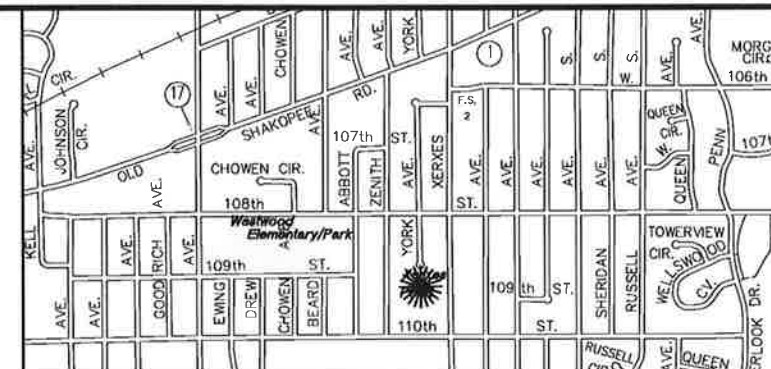
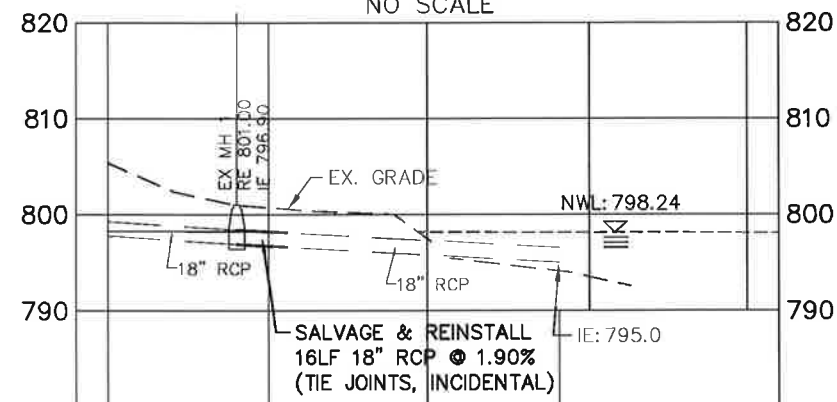


SITE A - XERXES POND

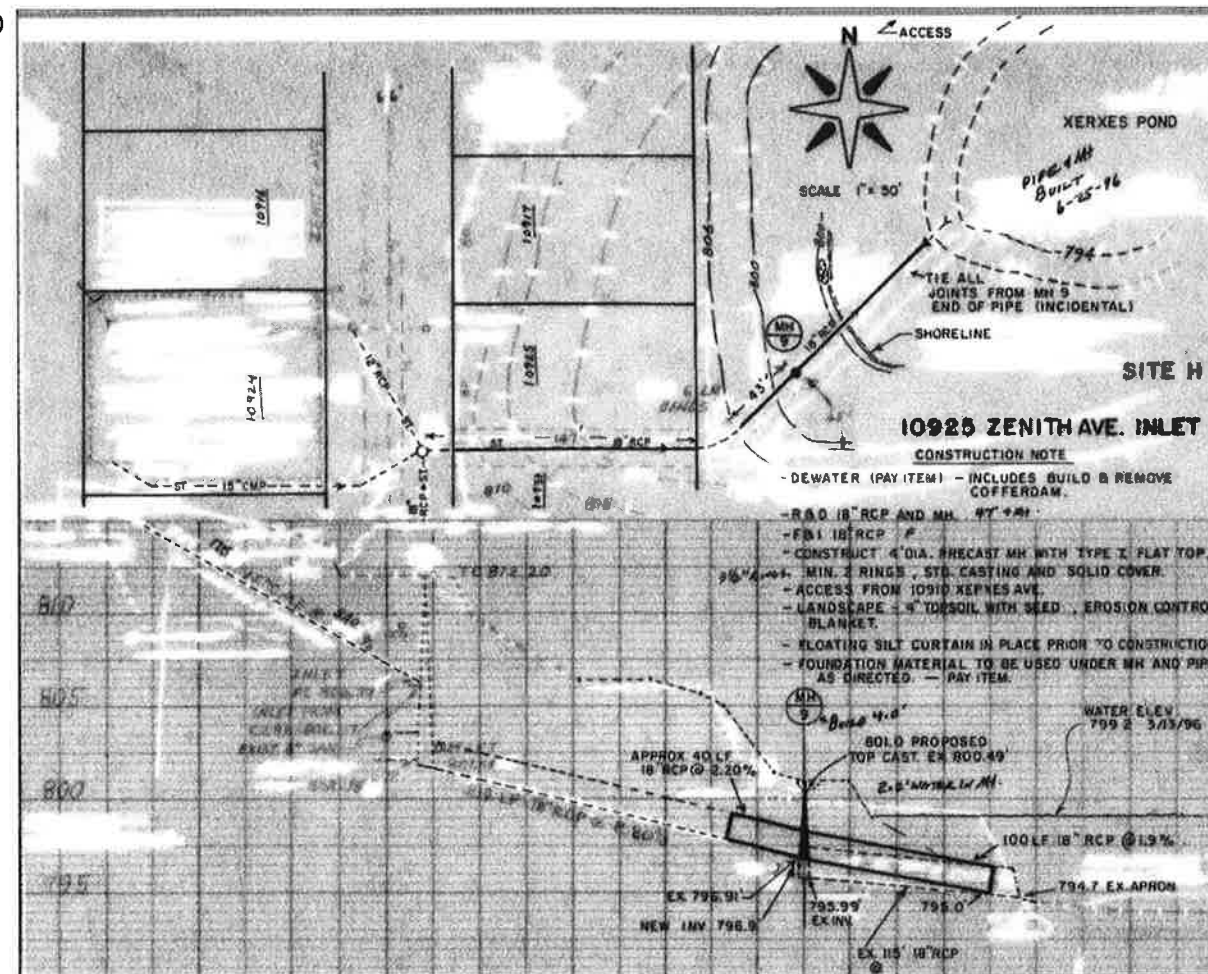
10910 XERXES AVENUE SOUTH

SECTION - STORM SEWER REPAIR

NO SCALE

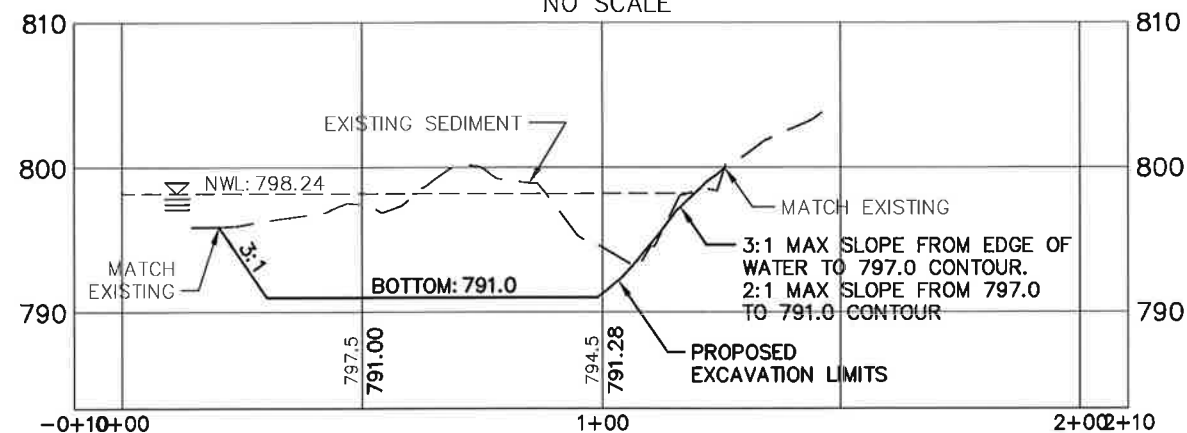


1996 STORM SEWER REPLACEMENT AS-BUILT
(FOR PIPE REPAIR INFORMATIONAL USE ONLY)



SECTION A-A

NO SCALE



REVISIONS

[illegible]

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DRAWN:	DAC
CHECKED:	SW
APPROVED:	SW

SHEET:
5 OF 8

SITE A - XERXES POND

SEDIMENT EXCAVATION AND STORM SEWER REPAIRS

**CITY OF
BLOOMINGTON**
1700 W 98TH ST.
BLOOMINGTON MN 55431
PHONE (612) 252-7200

ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT

2016-902 RIVER TERRACE OUTFALL PROJECT

Drawing name: H:\PROJECTS\2016\2016-902 Storm and Pond Maint Project\CAD Files\2016-902 Plan - RIVER TERRACE OUTFALL.dwg -- Printed: Oct 28, 2016 -- 12:33pm

CONSTRUCTION NOTES

SITE ACCESS

- * ACCESS SITE VIA RIVER SERVICE ROAD (LYNDALE AVE S. TERMINUS) THEN CREATE A TEMPORARY ACCESS TRAIL NORTH THROUGH CITY PROPERTY AS SHOWN ON MAP.
- * TEMPORARY USE OF CULVERTS, FABRIC, WOODCHIPS, TREE DOWNFALL AND OTHER MATERIALS MAY BE REQUIRED TO CROSS SATURATED OR WET AREAS
- * SEE SPECIAL PROVISIONS

WATER MANAGEMENT

- * GROUND WATER SEEPS FROM THE RAVINE ALONG THE PIPE ALIGNMENT TO A VARYING DEGREE DEPENDING ON RECENT WEATHER ACTIVITIES, GROUND WATER LEVELS AND TIME OF YEAR. DIVERSION OF WATER AND STREAM BYPASS CHANNELS MAY BE REQUIRED BY THE CONTRACTORS OPERATIONS, AS APPROVED BY THE ENGINEER (INCIDENTAL)

TREE REMOVAL/ MANAGEMENT

- * EXISTING DEAD TREE DOWNFALL CAN BE LEFT ON SITE AND PUSHED ASIDE AS NEEDED TO ALLOW FOR CONSTRUCTION.
- * PAYMENT FOR CLEARING AND GRUBBING SHALL BE MADE FOR THE AREA (PER ACRE) MEASURED 10 FEET BEYOND THE OUTSIDE TRUNK OF QUALIFYING TREES. THIS AREA SHALL BE MEASURED AROUND THE PERIMETER OF DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS AND STAGING AREA

CONSTRUCT STORM SEWER AS SHOWN

- * REMOVE 845 LF STORM SEWER PIPE (24" CMP)
- * REMOVE 4 MANHOLES
- * FURNISH AND INSTALL 851LF 26" DR32.5 FUSED HDPE
- * MAINTAIN A MINIMUM PIPE BEND RADIUS OF $\geq 91'$ OR AS RECOMMENDED BY THE MANUFACTURER.
- * MAINTAIN A MINIMUM PIPE COVERAGE OF 3' TO TOP OF PIPE
- * FURNISH AND INSTALL TWO 48" DIA MANHOLE
- * FURNISH AND INSTALL ONE 84" DIA MANHOLE
- * FURNISH AND INSTALL 30 TONS CLASS III RIP RAP
- * FURNISH AND INSTALL 15 TON GRANULAR FILTER MATERIAL
- * SEE SPECIAL PROVISIONS

SEDIMENT CONTROL

- * FURNISH AND INSTALL 300 LF SILT FENCE AS DIRECTED

EROSION CONTROL/ LANDSCAPING

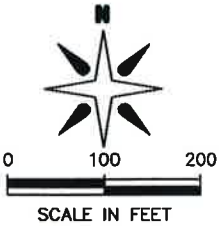
- * FURNISH AND INSTALL ROCK CHECK DAM AS DIRECTED
- * FURNISH AND INSTALL TOP SOIL BORROW (ONLY SALVAGED NATIVE TOPSOIL SHALL BE USED SOUTH OF STATION 6+00)
- * FURNISH AND INSTALL MNDOT SEED MIX 35-241 (MESIC PRAIRIE GENERAL) OVER ALL AREAS DISTURBED FROM CONSTRUCTION AT A RATE OF 36.5 LBS/ ACRE
- * FURNISH AND INSTALL EROSION CONTROL BLANKET, CATEGORY 3 (SPECIAL) OVER ALL AREAS DISTURBED BY CONSTRUCTION FROM STATION 0+00 TO 6+00
- * FURNISH AND INSTALL EROSION CONTROL BLANKET CATEGORY 2 (SPECIAL) OVER ALL OTHER DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS
- * FURNISH AND INSTALL 300 LF OF 12" DIAMETER WOOD FIBER SEDIMENT LOGS IN 60' LENGTHS SPACED 50' APART INSTALLED PARALLEL TO GRADE CONTOURS OR AS DIRECTED BY THE ENGINEER

SITE SAFETY

- * CONTRACTOR IS RESPONSIBLE TO ENSURE THE SAFETY OF ACCESS ROADS INCLUDING STAGING AREAS OR WORK PLATFORMS ON OR OVER ICE

SITE B – RIVER TERRACE OUTFALL

1200 WEST 110TH STREET



REVISIONS	
DATE	DESCRIPTION

HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Steven W. Segar
Steven W. Segar
25072
10/3/16
L.C. # DATE

DRAWN: DAC
CHECKED: SWS
APPROVED: SWS

SHEET:
6 OF 8

CITY OF
BLOOMINGTON
MINNESOTA

ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
2016-902 STORM SEWER AND
POND MAINTENANCE PROJECT

1700 W 98TH ST.
BLOOMINGTON MN 55431
PHONE (952) 563-8700

SITE B
RIVER TERRACE OUTFALL
SITE LOCATION/ CONSTRUCTION NOTES

Drawing name: H:\PROJECTS\2016-902 Storm and Pond Maint Project\CAD Files\2016-902 Plan - RIVER TERRACE OUTFALL.dwg -- Printed: Oct 28, 2016 -- 12:34pm

CONSTRUCTION NOTES

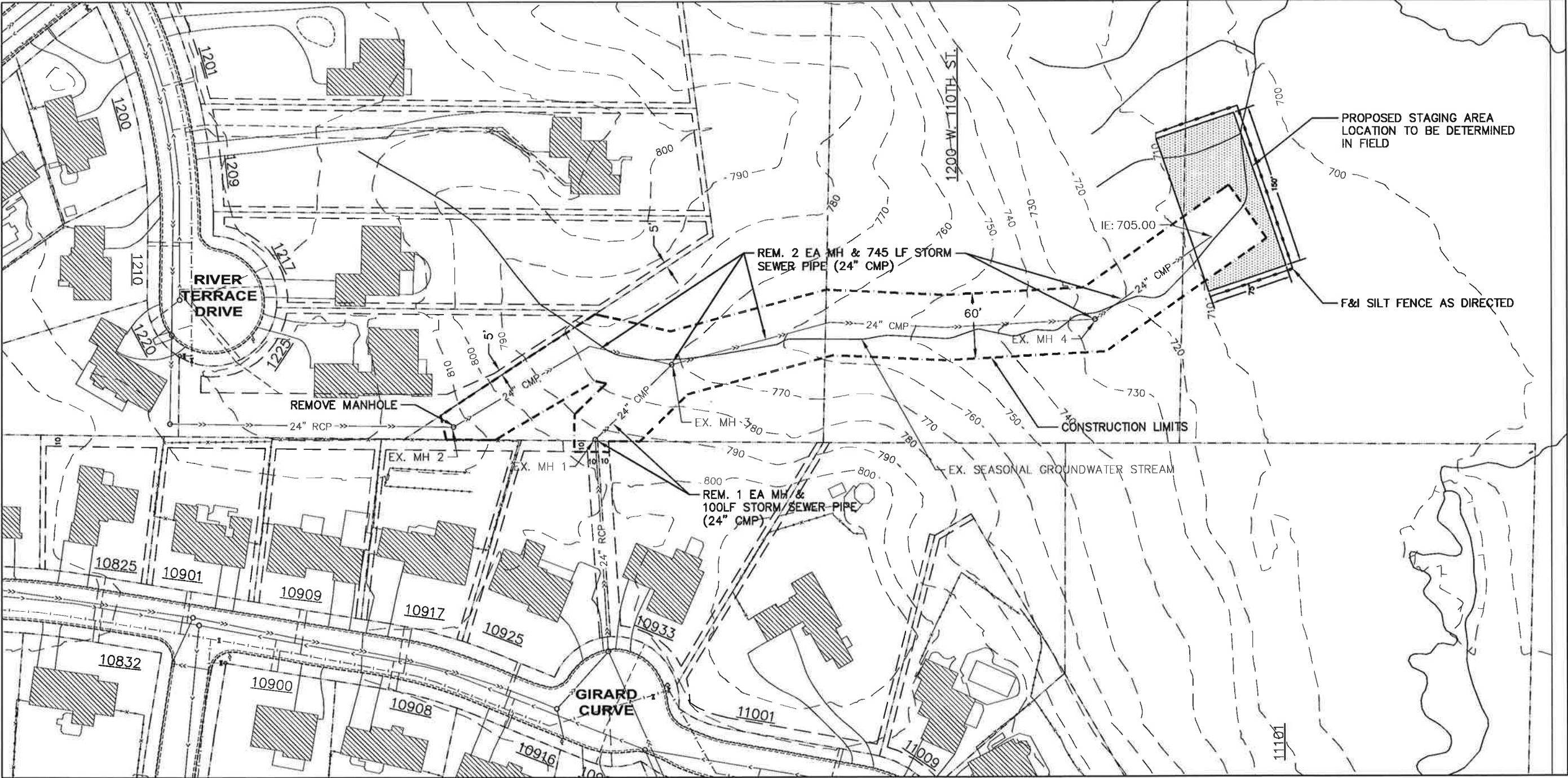
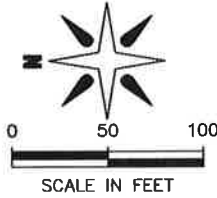
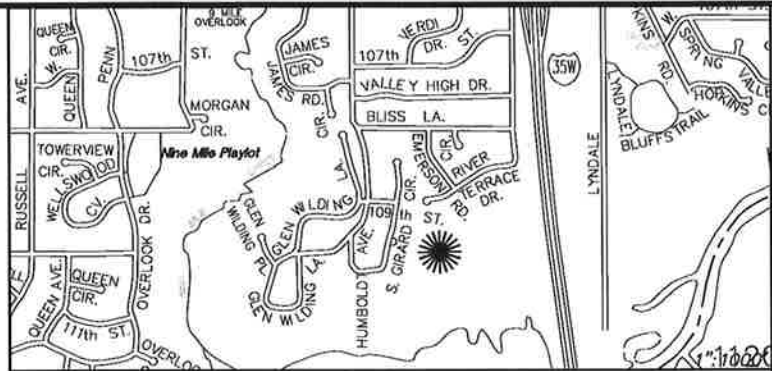
- CONSTRUCT STORM SEWER AS SHOWN
- * REMOVE 845 LF STORM SEWER PIPE (24" CMP)
- * REMOVE 4 MANHOLES
- * SEE SPECIAL PROVISIONS

TREE REMOVAL / MANAGEMENT

- * EXISTING DEAD TREE DOWNFALL CAN BE LEFT ON SITE AND PUSHED ASIDE AS NEEDED TO ALLOW FOR CONSTRUCTION.
- * PAYMENT FOR CLEARING AND GRUBBING SHALL BE MADE FOR THE AREA (PER ACRE) MEASURED 10 FEET BEYOND THE OUTSIDE TRUNK OF QUALIFYING TREES. THIS AREA SHALL BE MEASURED AROUND THE PERIMETER OF DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS AND STAGING AREA

SITE B – RIVER TERRACE OUTFALL

1200 WEST 110TH STREET



SITE B
RIVER TERRACE OUTFALL
EXISTING CONDITIONS/ REMOVALS

CITY OF
BLOOMINGTON
MINNESOTA
1700 W 98TH ST
BLOOMINGTON MN 55431
PHONE (952) 853-8700
ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
2016-902 STORM SEWER AND
POND MAINTENANCE PROJECT

REVISIONS	
DATE	DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Steven W. Segor
Steven W. Segor
25072
10/3/16
LIC. # DATE

DRAWN: DAC
CHECKED: SWS
APPROVED: SWS

Drawing name: H:\PROJECTS\2016-2017\Storm and Pond Maint Project\CAD Files\2016-902 Plan - RIVER TERRACE OUTFALL.dwg -- Printed: Oct 28, 2016 -- 3:12pm

CONSTRUCTION NOTES

CONSTRUCT STORM SEWER AS SHOWN

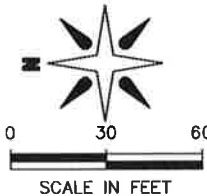
- * FURNISH AND INSTALL 851LF 26" DR32.5 FUSED HDPE
- * MAINTAIN A MINIMUM PIPE BEND RADIUS OF $\geq 91'$ OR AS RECOMMENDED BY THE MANUFACTURER.
- * MAINTAIN A MINIMUM PIPE COVERAGE OF 3' TO TOP OF PIPE
- * FURNISH AND INSTALL TWO 48" DIA MANHOLE
- * FURNISH AND INSTALL ONE 84" DIA MANHOLE
- * FURNISH AND INSTALL 30 TONS CLASS III RIP RAP
- * FURNISH AND INSTALL 15 TON GRANULAR FILTER MATERIAL
- * SEE SPECIAL PROVISIONS

LANDSCAPING

SEE SHEET 6 FOR RESTORATION NOTES

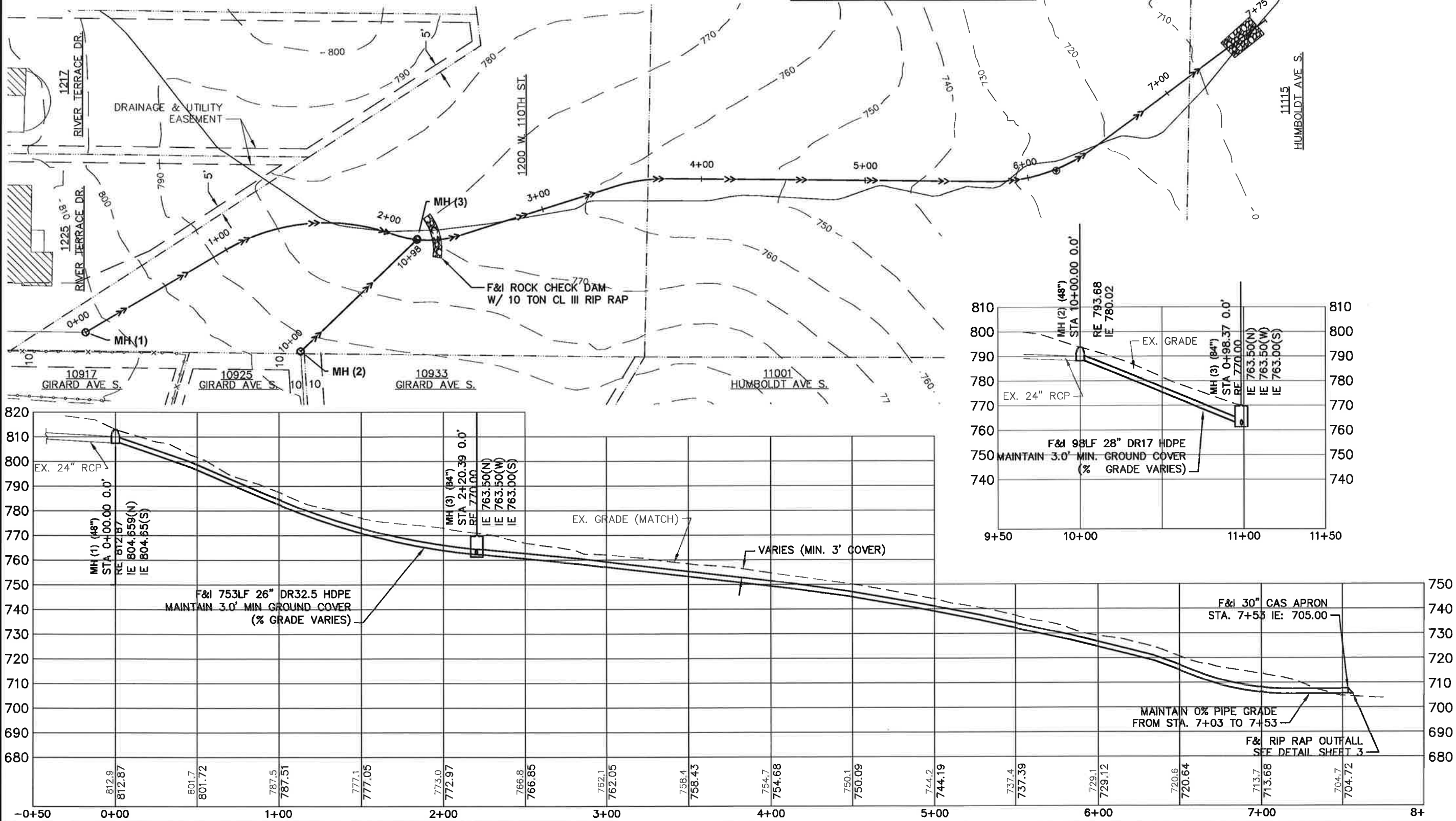
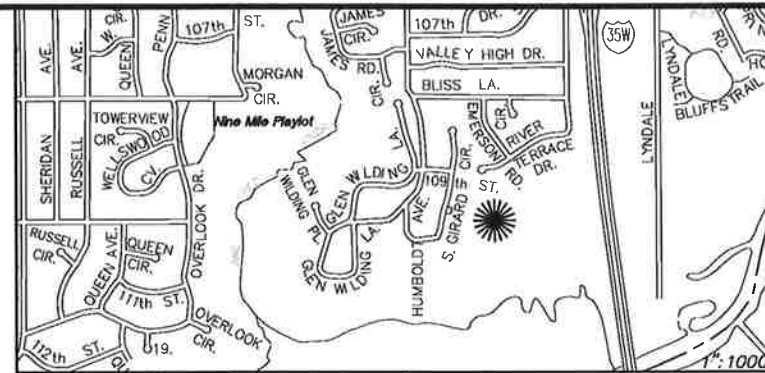
SITE B - RIVER TERRACE OUTFALL

1200 WEST 110TH STREET



SEWER STRUCTURE SCHEDULE

NO.	DESIGN	CASTING ASSEMBLY
MH 1	48" DIA	SOLID COVER
MH 2	48" DIA	SOLID COVER
MH 3	84" DIA	BEEHIVE GRATE



REVISIONS

DATE	DESCRIPTION	BY

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

25072 10/3/16
L.C. # DATE
Steven W. Segor

DRAWN: DAC
CHECKED: SWS
APPROVED: SWS
SHEET: 8 OF 8

CITY OF BLOOMINGTON MINNESOTA
ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
2016-902 STORM SEWER AND POND MAINTENANCE PROJECT

SITE B
RIVER TERRACE OUTFALL
STORM SEWER PLAN/ PROFILE